**IN THE CLAIMS**

*Please find below a listing of all of the pending claims. The status of each claim is set forth in parentheses. This listing will replace all prior versions, and listings, of claims in the present application.*

1. (Previously Presented) A method for enhancing wireless communications, said method comprising:

measuring, in real-time, interference metrics associated with links between a wireless communication node and a plurality of client nodes; and

real-time scheduling, based on said interference metrics, communications between said wireless communication node and said plurality of client nodes to reduce service level variability among said plurality of client nodes;

wherein the wireless communication node performs the real-time scheduling on behalf of the client nodes, and wherein wireless communications between a pair of client nodes transit through the communication node.

2. (Original) The method of claim 1, wherein a channel set of a plurality of frequency channels are available for use in a plurality of adjacent service area portions.

3. (Original) The method of claims 2, wherein said adjacent service area portions comprise sectors of said wireless communication node.

4. (Original ) The method of claim 2, wherein said adjacent service area portions comprise radiation patterns of a plurality of wireless communication nodes, said plurality of wireless communication nodes including said wireless communication node.

5. (Original) The method of claim 4, wherein each wireless communication node of said plurality of wireless communication nodes, schedules transmission independently such that transmissions occur in a channel used by wireless communication node only a fraction of the time and are randomly uniformly distributed over time.

6. (Previously Presented) The method of claim 1, wherein said real-time scheduling communications reserves selection of client nodes having low interference associated therewith, as determined from said interference metrics, until other client nodes having higher interference associated therewith, as determined from said interference metrics, have been scheduled or are determined to have sufficiently high interference associated therewith that communication is undesirable.

7. (Original) The method of claim 1, wherein said measuring interference metrics comprises:

said plurality of client nodes continuously monitoring control channel transmission.

8. (Original) The method of claim 1, wherein said measuring interference metrics comprises:

determining a probability density function of channel power and time correlation length.

9. (Original) The method of claim 1, wherein said measuring interference metrics comprises:

measuring statistical interference metrics.

10. (Original) The method of claim 7, wherein said control channel transmissions are made using a synchronous protocol.

11 (Original) The method of claim 10, wherein said synchronous protocol comprises an IEEE 802.16 protocol.

12. (Original) The method of claim 7, further comprising:

selected ones of said client nodes providing a feedback message to said wireless communication node.

13. (Previously Presented) The method of claim 12 wherein said feedback message comprises channel quality information as determined by a respective one of said subscriber stations client nodes by monitoring said control channel transmissions.

14. (Original) The method of claim 12, further comprising:

said wireless communication node determining said selected ones of said client nodes from those client nodes most likely to need communication services.

15. (Original) The method of claim 14, wherein said determining said selected ones of said client nodes comprises:

using downlink queue information.

16. (Original) The method of claim 14, wherein said determining said selected ones of said client nodes comprises:

using time since last communication information.

17. (Original) The method of claim 14, wherein said determining said selected ones of said client nodes comprises:

using a access fairness determination.

18. (original) The method of claim 7 wherein said control channel includes feedback message control information to control selected ones of said client nodes to provide a feedback message to said wireless communication node including interference metric information.

19. (Previously Presented) The method of claim 7, wherein said control channel includes a downlink map establishing downlink communication assignments with respect to one or more said client nodes in accordance with said real-time scheduling communications between said wireless communication node and said plurality of client nodes.

20. (Previously Presented) The method of claim 7, wherein said control channel includes an uplink map establishing uplink communication assignments with respect to one or more said client nodes in accordance with said real-time scheduling communications between said wireless communication node and said plurality of client nodes.

21. (Original) The method of claim 1, further comprising:

controlling selected ones of said client nodes to provide a feedback message including measured interference metrics information with respect to an associated downlink.

22. (Original) The method of claim 21, further comprising:

measuring instantaneous uplink interference metrics associated with particular client nodes by monitoring corresponding ones of said feedback messages.

23. (Previously Presented) The method of claim 1, wherein said real-time scheduling of communications in an uplink is controlled to provide uplink transmission reliability with minimized service level variability.

24. (Previously Presented) The method of claim 1, wherein said real-time scheduling of communications in a downlink is controlled to provide a desired downlink transmission bandwidth with minimized service level variability.

25. (Original) The method of claim 1, wherein said wireless communication node comprises a base station providing a plurality of wireless links.

26. (Original) The method of claim 25, wherein said base station utilizes a narrow beam antenna array in providing said plurality of wireless links.

27. (Original) The method of claim 25, wherein said client nodes comprise subscriber stations.

28. (Original) The method of claim 27, wherein said subscriber stations provide wireless links to a plurality of subscriber terminals using a protocol different than that implemented in a link between said subscriber station and said base station.

29. (Previously Presented) A method for providing wireless communications, said method comprising:

obtaining interference metrics for a plurality of wireless communication links;

real-time scheduling downlink communications via ones of said plurality of wireless communication links using said interference metrics to provide high bandwidth throughput while reducing service level variability among said plurality of wireless communication links; and

real-time scheduling uplink communications via ones of said plurality of wireless communication links using said interference metrics to provide a high level of reliability with respect to uplinks of said plurality of wireless communication links;

wherein the real-time scheduling of downlink communications and uplink communications is performed by a wireless communication node through which communications over the wireless communication links transit.

30. (Previously Presented) The method of claim 29, further comprising:

enabling all frequency channels for use throughout all areas of a service area of a wireless network, said wireless network providing said plurality of wireless communication links.

31. (Previously Presented) The method of claim 29, wherein said plurality of wireless communication links are associated with a the wireless communication node in communication with a plurality of client nodes, wherein said wireless communication node schedules transmission independently such that transmission on a particular channel occurs only a fraction of the time and is randomly uniformly distributed over time.

32. (Original) The method of claim 29, wherein said obtaining interference metrics comprises:

determining a probability density function of channel power and time correlation length.

33. (Previously Presented) The method of claim 29, wherein said wireless communication links are associated with a plurality of client nodes served by a- the wireless communication node. wherein said real-time scheduling downlink communications reserves selection of client nodes having low interference associated therewith until other client nodes having higher interference associated therewith have been scheduled or are determined to have sufficiently high interference associated therewith that communication is undesirable.

34. (Previously Presented) The method of claim 29, wherein said wireless communication links are associated with a plurality of client nodes served by a the wireless communication node wherein said real-time scheduling uplink communications reserves selection of client nodes having low interference associated therewith until other client nodes having higher interference associated therewith have been scheduled or are determined to have sufficiently high interference associated therewith that communication is undesirable.

35. (Original) The method of claim 29, wherein said obtaining interference metrics comprises:

each of a plurality of client nodes continuously monitoring a control channel in a downlink;

storing interference metric information as determined by said monitoring said control channel; and

particular ones of said client nodes transmitting a feedback message in response to a feedback message control signal from a wireless communication node.

36. (Original) The method of claim 35, further comprising:

selecting said particular ones of said client nodes from said plurality of client nodes as a function of client nodes most likely to need ser ice by said wireless communication node.

37. (Original) The method of claim 36, wherein said selecting particular ones of said client nodes comprises:

determining client nodes most likely to need service from transmission queue information.

38. (Original) The method of claim 36, wherein said selecting particular ones of said client nodes comprises:

determining client nodes having a longest time since last communication.

39. (Original) The method of claim 35, wherein said obtaining interference metrics further comprises:

said wireless communication node monitoring said feedback messages to determine instantaneous interference in an uplink.

40. (Original) The method of claim 29, further comprising:

determining a downlink map consistent with said scheduled downlink communications.

41. (Original) The method of claim 40, further comprising:

transmitting said downlink map via said wireless communication links.

42. (Original) The method of claim 29, further comprising:

determining an uplink map consistent with said scheduled uplink communications.

43. (Original) The method of claim 42, further comprising:

transmitting said uplink map via said wireless communication links.

44. (original) The method of claim 29, wherein said reducing service level variability results in a reduction in an achievable average throughput bandwidth while moving a minimum service level above an outage threshold service level.

45. (Previously Presented) A communication system comprising:

a base station controller distinct from a set of subscriber stations wherein communications between subscriber stations transit through the base station controller and wherein the base station controller implements a synchronous point to multipoint (PTMP) protocol, the base station controller comprising:

a memory storing interference metrics associated with a plurality of communication links of said communication system; and

a real-time scheduler in communication with said memory and applying a real-time scheduling algorithm to said interference metrics to real-time schedule communications via ones of said plurality of communication links to minimize variance of communication service levels associated with said plurality of communication links.

46. (Canceled).

47. (Previously Presented) The system of claim 45, wherein the base station controller further comprising:

a subscriber station controller having a processor operable to monitor a downlink control channel and derive a portion of said interference metrics therefrom, said subscriber station controller operable in response to a control signal from said base station controller to provide a feedback message including said portion of said interference metrics.

48. (Original) The system of claim 47, wherein said processor continuously monitors said down link control channel.

49. (Original) The system of claim 47, wherein said base station controller monitors said feedback message to determine an uplink interference metric comprising a portion of said interference metrics.

50. (Previously Presented) The system of claim 45, wherein service level variability minimization as provided by said real-time scheduler results in a reduction in an achievable average throughput bandwidth while moving a minimum service level above an outage threshold service level.

51. (Previously Presented) The system of claim 45, wherein said real-time scheduling algorithm reserves selection of subscriber stations having low interference associated therewith for scheduling until other subscriber stations having higher interference associated therewith have been scheduled or are determined to have sufficiently high interference associated therewith that communication is undesirable.

52. (Previously Presented) A method for scheduling wireless communications, said method comprising:

providing a plurality of channels for use in each of a plurality of service area portions;

determining link quality metrics with respect to links between a wireless communication node and a plurality of client nodes; and

real-time scheduling communications, by the wireless communication node, between ones of said client nodes and said wireless communication node such that a first client node having acceptable link quality metrics with respect to a first channel of said plurality of channels experiencing high levels of interference is scheduled to use said first channel while a client node having poor link quality metrics with respect to each said channel of a service area portion is scheduled 10 use a second channel of said plurality of channels experiencing lower levels of interference than said first channel.

53. (Original) The method of claim 52, wherein said plurality of channels provided in each service area portion of a service area comprise a same set of channels.

54. (Original) The method of claim 52, wherein said wireless node schedules transmissions such that transmissions on a particular frequency channel occur only a fraction of the time and are randomly uniformly distributed over time.

55. (Original) The method of claim 52, wherein said determining link quality metrics comprises:

determining a probability density function of channel power and time correlation length.

56. (Original) The method of claim 53, wherein said service area comprises a base station service area and said plurality of service area portions comprise areas illuminated by adjacent antenna beams of said base station.

57. (Original) The method of claim 52, wherein said client nodes employ highly directional antennas directed toward said wireless communication node.

58. (Original) The method of claim 53, wherein said service area comprises a network service area including multiple base stations and said plurality of service area portions comprise areas illuminated by adjacent antenna beams of multiple ones of said base stations.

59. (Previously Presented) The method of claim 52, wherein said real-time scheduling communications comprises:

implementing limited loading of each channel of said plurality of channels used in a service area portion.

60. (Original) The method of claim 59, wherein said implementing limited loading establishes a maximum loading for each channel corresponding to the reciprocal of a number of channels of said plurality of channels used in said service area portion .

61. (Original) The method of claim 60, wherein transmission for each channel is randomly uniformly time distributed.

62. (Previously Presented) The method of claim 52, wherein said real-time scheduling communications reserves selection of client nodes having low interference associated therewith, as determined from said link quality metrics, until other client nodes having higher interference associated therewith, as determined from said link quality metrics, have been scheduled or are determined to have sufficiently high interference associated therewith that communication is undesirable.

63. (Original) The method of claim 52, wherein said determining link quality metrics comprises:

ones of said plurality of client nodes continuously monitoring control channel transmissions from said wireless communication node.

64. (Original) The method of claim 63, wherein said control channel transmissions are made using a synchronous protocol.

65. (Previously Presented) The method of claim 63, wherein said control channel includes a down link map establishing downlink communication assignments with respect to one or more said client nodes in accordance with said real-time scheduling communications between said wireless communication node and said plurality of client nodes.

66. (Previously Presented) The method of claim 63, wherein said control channel includes an uplink map establishing uplink communication assignments with respect to one or more said client nodes in accordance with said real-time scheduling communications between said wireless communication node and said plurality of client nodes.

67. (Original) The method of claim 52, further comprising:

selected ones of said client nodes providing a feed back message to said wireless communication node under control of said wireless communication node, said feedback message providing information with respect to said link quality metrics.

68. (Original) The method of claim 67, further comprising:

said wireless communication node determining said selected ones of said client nodes from those client nodes most likely to need communication services.

69. (Original) The method of claim 67, wherein said determining said selected ones of said client nodes comprises:

using downlink queue information.

70. (Original) The method of claim 67, wherein said determining said selected ones of said client nodes comprises:

using time since last communication information.

7 1. (Original) The method of claim 67, wherein said determining said selected ones of said client nodes comprises:

using a access fairness determination.

72. (Original) The method of claim 67, further comprising:

measuring instantaneous uplink interference metrics associated with particular client nodes by monitoring corresponding ones of said feedback messages.

73. (Previously Presented) The method of claim 52, wherein said real-time scheduling of communications in an uplink is controlled to provide uplink transmission reliability with minimized service level variability.

74. (Previously Presented) The method of claim 52, wherein said real-time scheduling of communications in a downlink is controlled to provide a desired downlink transmission bandwidth with minimized service level variability.

75. (Original) The method of claim 52, wherein said wireless communication node utilizes a narrow beam antenna array in providing said plurality of wireless links.